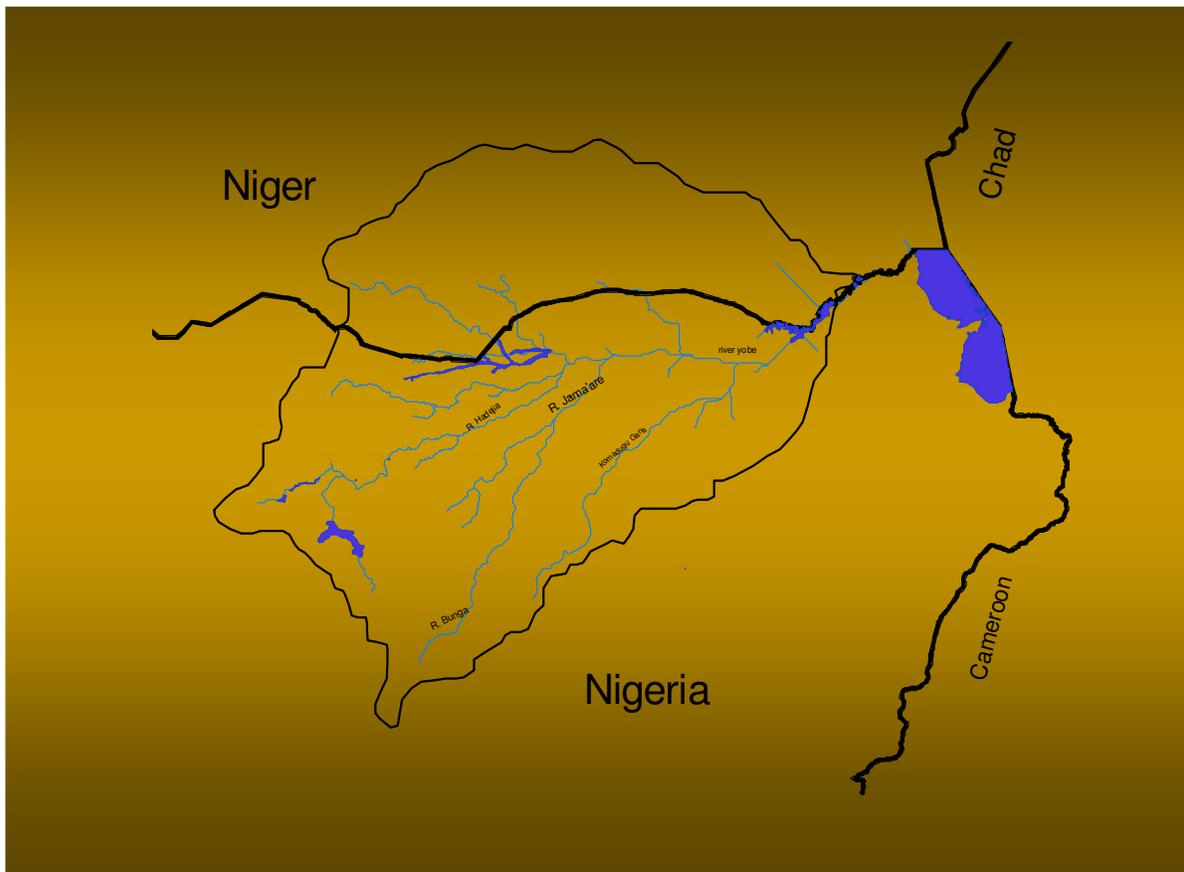




FMAWR-IUCN-NCF KOMADUGU YOBE BASIN PROJECT

LESSONS LEARNED FROM THE KYB PROJECT PHASE 1



KANO, JULY 2008

**LESSONS LEARNED
FROM PHASE 1
of
THE FMAWR-IUCN-NCF KOMADUGU YOBE BASIN PROJECT**

a report submitted to

**The PMU of the KYB Project
(Client)**

by

**Professor Francis Adeyemi Adeniji
(Consultant)**

under a consultancy contract agreement
***Ref:* IUCN-KYBP/Adeniji/2008; *Project:* 80104-031; *Dated:* 21/06/2008**

KANO, 4TH JULY 2008

The Essentials of the Agreement

- (i) **The Project:** FMAWR-IUCN-NCF Komadugu Yobe Basin Project
- (ii) **Contract No.:** IUCN-KYBP/Adeniji/2008; **Project:** 80104-031; **Dated:** 21/06/2008
- (iii) **The Service:** To document the lessons learned during the first phase of the Project
- (iv) **The Client:** FMAWR-IUCN-NCF KYB Project, 15A Race Course Road, Nassarawa GRA, P.M.B. 3139, Kano, Nigeria; Tel./Fax:+234-64-635779
e-mail: KomaduguProject@iucn.org
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e-mail: faadeniji@yahoo.co.uk
- (vi) **Coverage:** The entire catchments area of the KYB in NE Nigeria and SE Niger
- (vii) **The Agreement and its administration comprise:**

The documentation, in a reading-friendly manner, of the lessons learned during the first phase of the Project. In addition to other relevant methods and approaches that the Consultant would employ, the Project Management Unit (PMU) will give its full cooperation and support to the Consultant: making available to him all deliverables and documentations. It will provide all the necessary materials identified during the initial contact, discussion and appointment phase of the assignment, and engage a couple of stakeholders, if it is so desired.

The Consultant, who should be conversant with the study area and possess adequate facilities to discharge the tasks in terms of logistics and other working equipment, is expected to tour parts of the basin, visiting partners and stakeholders. He shall start work as soon as the Contract is signed, not later than 23rd June 2008 and submit the Final Report of the LESSONS LEARNED Document to the KYB Project Coordinator, after sharing and discussing the draft Report with the PMU, not later than Friday 4th July 2008. Reports, including the Final one, will be required in both soft and hard copies.

- (viii) **The Remuneration** for the field and desk tasks covering the eight-day period is one hundred and sixty thousand naira (₦ 160,000.00) only, payable in two equal instalments, at the start and satisfactory end of the assignment.

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1. INTRODUCTION

1.1 Preamble

The Komadugu Yobe Basin (KYB), comprising a network of river systems and wetlands, supports a wide range of ecological processes and economic activities, including recession agriculture, pastoralism, forest regeneration, fish breeding and production, drought-fall-back security, and tourism potential. Based on these activities, several centres of development, trading and administration have cropped up along river courses and on floodplains within the basin, constituting relatively high population concentrations in a dry land region, which is characteristically sparsely populated. Today, the livelihood systems of the over 10 million people who live in the basin, both in Nigeria and Niger, depend almost exclusively on these activities. The Komadugu Yobe River is the life-wire of these communities. Moreover, it is the source of internationally shared water the management of which in Nigeria has an important bearing on diplomatic relationships between Nigeria and four countries (Niger, Chad, Cameroon and Central African Republic). All these countries share the Lake Chad basin in which the KYB is located.

The KYB contains very important wetlands, in particular the Hadejia Nguru Wetlands (HNWs), which has Nigeria's premier Ramsar site, which are of immense local, national and international economic and ecological importance. In addition to providing firewood and grazing in the dry season, there are also about 100 species of fish, about five of which are endemic. There are also some endemic plant species of agronomic importance, which are threatened with extinction. An important example is a variety of rice that is found in the Gashua to Geidam stretch. In the early 1990s, the International Union for the Conservation of Nature (IUCN) and partners estimated at US\$ 170 per ha the annual economic benefits from overall land-use systems of the HNWs.

1.2 The Problems

Despite its importance, the environment and key natural resources in most West African countries are increasingly threatened by escalating and unsustainable pressures from fast-growing populations and cities as well as expanding agricultural and industrial activities. This is particularly true since the 1970s as the general climate context face chronic variability and deficits in rainfall and surface water resources partly due to global warming. In the push for accelerated economic growth, many basin and national water policies show clear limitations in their ability to promote equitable and sustainable resource use. The KYB is no exception and this calls for an urgent intervention.

1.3 Project Background

In response to the problems enumerated above, the Project for improving land and water resources in the KYB, which is a joint initiative of the Nigeria Federal Ministry of Agriculture and Water Resources (FMAWR), the International Union for Conservation of Nature (IUCN) and the Nigerian Conservation Foundation (NCF), was proposed. The Project started with a planned initial phase of two years and three months with the objective of improving the institutional framework for managing water resources in the KYB, which was to be done through consensus on key water management principles and institutionalised consultation and coordination mechanisms. As events unfolded, the 2¹/₄ years was extended by three months. Thereafter, a provision for a bridging period of 16 months (July 2007 – October 2008) was made to serve as an interface between the Project's Phases 1 and 2.

The first phase of the Project, which is now completed, had “the establishment and sharing of a sound knowledge-base to facilitate stakeholder negotiations and informed decision-making” as one of its components. To achieve this objective, having a good understanding of the socio-economic as well as the environmental conditions of the basin was quite important as the consultation and dialogue processes of the Project was to be based on the best available knowledge on the basin, in addition to carrying out a comprehensive water audit exercise. These knowledge-base studies have led to a common understanding of the issues and challenges facing the basin in terms of the land and water resources, and have offered better understanding of the perspectives and priorities of the basin.

The Project had facilitated the participation of all stakeholder groups in the development of key principles for the management of the KYB through facilitating a process of revitalising the basin-wide stakeholder forum. This forum has been used to ensure that the various stakeholders, interest groups, water user groups and the Basin States take part in the discussions on water allocation and water sharing arrangements, and that their views, needs and aspirations inform the overall decision-making process.

The Project also supported and complemented the current and revitalised institutional framework, which revolves around the Hadejia-Jama’are-Komadugu-Yobe (Basin) Coordinating Committee (HJKYCC). All States in the basin are represented in this Committee as well as the Federal Ministry of Agriculture and Water Resources, and Federal Ministries responsible for Environment and Health. This Project was also instrumental to the creation of the Hadejia-Jama’are-Komadugu-Yobe Basin Trust Fund.

1.4 Project Goal and Objectives

The long-term goal of the Project is “**the equitable and sustainable use of land and water resources of the KYB through improved management**”. The purpose of the first phase was to contribute to this goal by helping *establish a framework for broad-based and informed decision making process based on agreed principles for equitable use and sustainable management of the Komadugu Yobe Basin.*

The specific objectives for this purpose were therefore:

- *To build decision-support knowledge base so that water management options and other resources management decisions are taken on the basis of up-to-date information on water audit, socio-economic and ecological conditions of the basin;*
- *To pilot-test improved water management field observations so that efficient and sustainable water utilisation techniques and approaches are demonstrated in downstream areas;*
- *To help establish a legal and policy enabling environment through the adoption and implementation of a water charter and supporting basin-level consultation and coordination mechanisms;*
- *To develop a Catchment Management Plan (CMP) using participatory approaches and the accumulated knowledge, policy and pilot activity components of the Project; and*
- *To ensure that the Project is effectively managed, monitored and evaluated, so that lessons on managing river basins are learned and disseminated to benefit similar initiatives.*

2. ACTIVITIES, IMPLEMENTATION ARRANGEMENTS AND OUTPUTS

2.1 Activities

In the past 42 months, the Project has engaged in the following activities in furtherance of its goals and objectives.

2.1.1 Decision-Support Knowledge Base

Geared towards improving the understanding of the dynamics of water demand and supply in the basin and the socio-economic and ecological condition of the people and other resources, data and information were collected in three important areas: water audit; socio-economic and environmental situation analysis; and sustainable water use options.

(i) The specific activities carried out under the water audit sub-component included:

- ❖ Initial review of the state of the water resources information base. This involved reviewing the nature of information currently available and analysing how the best possible database from existing meteorological network and secondary data to support the water auditing exercise could be built. It made recommendations for the updating (which also include expansion, rehabilitation and modernization) of the existing hydro-meteorological network for more accurate and reliable decision-support data system;
- ❖ Comprehensive water auditing. This involved: (a) the assessment of surface and groundwater resources in the basin, (b) the analysis of water quality, (c) the assessment of water demand in the basin, taking into account traditional water-dependent activities (flood-related agriculture, fishing, livestock production, forestry, etc.) and their related water requirements, (d) the review of all significant development interventions in the basin (dams, irrigation areas, water supplies for domestic use, etc.) and their related water requirements; and (e) an assessment of the overall water balance (water availability and water demand) in the basin;
- ❖ Analysis of water availability and water demand for the future. This included: (a) an analysis of projected water demand; and (b) an assessment of the impacts of climate change and variability on water resources availability in the basin;
- ❖ Dissemination of results of studies (relevant to all sub-components); and
- ❖ Establishment of a database at the Project office (relevant to all sub-components).

(ii) In respect of the socio-economic and environmental situation analysis, studies were carried out:

- ❖ To compile existing demographic and socio-economic information in order to develop a detailed basin profile with key parameters such as population size and distribution, education, gender, occupation, health status, access to safe water, sources of income, etc.;
- ❖ In sample surveys and participatory appraisals, to better understand populations' needs and priorities, the institutional landscape, constraints and

opportunities to participation in natural resources and water management decisions;

- ❖ To assess environmental and health impacts of: (a) changes in traditional water-related activities (new trends in flood-related agriculture, fishing practices, etc.); (b) hydraulic and hydro-agricultural infrastructure; (c) *Typha* invasion; and (d) human settlements dynamics as they relate to water management;
 - ❖ To assess the current state of the environment in the basin and study environmental flow requirements for selected critical basin ecosystems; and
 - ❖ To analyze possible socio-economic and environmental impacts of planned interventions and identified water demand scenarios.
- (iii) On water management options, the following activities were to be carried out to complete a study report on water management options for the KYB but the Project was constrained by limited financial and time resources and as such could not execute all of them as much as it wished:
- ❖ Using the information gathered under (i) and (ii) above to model future water availability and water demand scenarios;
 - ❖ Developing water management options to cope with these scenarios;
 - ❖ Analysing the extent to which dams operation procedures can be adjusted to these water management scenarios, taking into account constraints and opportunities related to outlet structures of upstream dams;
 - ❖ For each water management option, analyzing advantages and disadvantages and how the costs and benefits will be shared among States, sectors and user groups;
 - ❖ Making recommendations for priority water management options; and
 - ❖ Incorporating bio-monitoring and evaluation of the environment in each activity.

2.1.2 *Pilot Interventions*

To make reliable, efficient and sustainable water utilization techniques and approaches available for dissemination among the stakeholders and interest groups, decisions on field interventions were taken at the Project inception workshop through a consultative process using the following key criteria:

Ecological acceptability i.e. no or minimal adverse effects on other water users and on the basin ecosystem; **acceptability by all stakeholders** i.e. agreed by all main stakeholder groups and by the basin Stakeholder Forum; **acceptability by river basin regulators** i.e. endorsement by concerned State and Local Government authorities, and by Federal Government ministries and the Lake Chad Basin Commission (LCBC); **affordability** i.e. low cost; and **replicability** i.e. can be replicated at wider scale in the basin. Thus the pilot activities engaged in by the Project in collaboration with its sister projects, to improve the economic productivity of downstream water users while improving their social and ecological benefits, are as shown in the Table 1 below.

Table 1: List of Pilot Interventions for Phase 1

No.	Project Name	Nature of Work	Status/Remarks
1	Tiga Dam outlet flow restoration in the immediate vicinity of the dam	Outlet channel weeds clearance and desilting and servicing of outlet valves	Completed in May 2007
2	Miga/Keffin Hausa River bifurcation (desilting and embankment)	Opening of blocked channel bifurcation	About 80% of work is completed
3	Old Hadejia River channel clearance and desilting	Opening of blocked river channel	About 85% of work is completed
4	Auyo embankment and drainage channel excavation	Embankment stabilization and drainage channel excavation	About 50% of work is completed
5	Burum Gana channel clearance and excavation	Weeds channel clearance and intermittent desilting	About 50% of work is completed
6	Dabi embankment and inlet channel excavation	Dyke construction and embankment stabilization	About 50% of work is completed
7	Gabarin embankment and inlet channel excavation	Dyke construction and embankment formation	About 50% of work is completed
8	Ganuwar Kuka dyke reinforcement	Dyke construction by extension of length and reinforcement	About 50% of work is completed
9	Hadejia Barrage and environs embankment and improvement in communications	Dykes and embankments reinforcements and logistics and communication materials	About 50% of work is completed
10	Nguru lakes and environs conflict management of flood recession areas	Conflict resolution workshops and trainings. Cattle route demarcation. Logistics, communication improvements and information dissemination	About 50% of work is completed
11	KYB river system modest improvement of gauging stations	Rehabilitating some hydrological monitoring points/stations	About 60% of work accomplished

All the pilot intervention projects were LCBC-GEF-funded. As at the time of this reporting, all except the Tiga Dam Project are ongoing.

2.1.3 Review of Policy and Institutional Framework

To establish a legal and policy-enabling environment to support the institutionalization and implementation of a charter for management agreed by stakeholders and interest groups.

This objective had two sub-components: (a) developing an agreed charter for management and (b) creating the policy environment for the institutionalization of the charter.

In order to develop an agreed charter for management, it considered necessary to:

- ❖ Set in place a task team with specific responsibility for leading the charter formulation process;
- ❖ Organize a meeting of the task force to prepare meetings with high-level government officials at the State and Federal level for a consensus on the mandate and procedure of the Project consultation processes;
- ❖ Organize a scoping stakeholder meeting in each of the riparian States to map out existing and planned water-related interventions in the Basin, and identify priorities, issues and concerns;
- ❖ Strengthen the existing basin's Stakeholder Forum: training in negotiation skills, internal consultation meetings, support for coordination and communication;
- ❖ Organise a basin-wide Forum meeting to synthesis results of state-level scoping consultations and agree on the scope of the following components of the Project: water audit, situation analysis, definition of water management options, and needed institutional and policy changes;
- ❖ Organize second Forum meeting to review initial results from the various components of the Project and prepare State-level consultations to review study results and draft water management principles and options;
- ❖ Organize third and final Forum meeting to reach consensus on water management principles, water management options and required institutional changes.

For the purpose of creating a policy enabling environment for the institutionalization of the charter, the following activities were planned to achieve its endorsement and acceptance:

- ❖ Presentation of findings and recommendations from stakeholder forum to high-level Federal government officials;
- ❖ Organization of hearings with legislators of riparian States; and
- ❖ Presentation of findings and recommendations to the Governors of the riparian States of the KYB.

2.1.4 Development of Catchment Management Plan

To incorporate an ecosystem approach to basin management, it was agreed by main stakeholder and interest groups that the specific activities under this objective should include:

- ❖ Carrying out a consultant review of the existing CMP and using it as input to the new CMP along with the results of the Project components (knowledge base, emerging water management principles and options, and pilot interventions);
- ❖ Validation of the revised CMP by Stakeholder Forum meeting;
- ❖ Developing and disseminating a communication brief of the CMP; and
- ❖ Organizing a donor roundtable to seek support for: (a) the implementation of the CMP; and (b) for agreed water charter and mechanisms for coordination and consultation in the basin.

2.1.5 Effective Project Management

The KYB Project effectively managed, monitored and evaluated and lessons learned are documented and disseminated.

The specific activities included:

- ❖ Appointment of Project Director (Part-time);
- ❖ Recruitment of key project staff (Project Coordinator and Project Financial Administrator);
- ❖ Signing necessary MoU with key partner institutions;
- ❖ Developing annual work plans;
- ❖ Conducting project audit on a yearly basis;
- ❖ Organizing supervision missions; and
- ❖ Carrying out project evaluation.

2.2 Implementation Arrangements

2.2.1 General Principles and Approaches

The basic approach of the Project has had the following main features:

Although it has focused on Nigeria, the Project recognised Niger as well as other LCBC member states as key parties to the Project. The interests of LCBC member states have been represented in project activities and decision-making bodies by LCBC. As warranted ordinarily, LCBC would want direct involvement of member states in selected project activities. This is of critical importance for some aspects of the Project, especially its component on the Review of Policy and Institutional Framework.

The Project has built on and supported existing initiatives in the basin rather than being a parallel process. While targeting the KYB as a whole, the Project focused strategically on Nigeria for two main reasons: this country has critical and immediate interest in finding an agreed code of conduct and cooperating rules for the management of the currently disputed waters of the Komadugu-Yobe River basin. Through the HJKYCC, the Federal Government of Nigeria has already initiated a process aimed at improving coordination of water resources management of the KYB. The Project was designed to assist the Federal Government of Nigeria in these efforts. At the basin level, an on-going GEF-Lake Chad Basin project has a component on the KYB. One of the three objectives of this component is to ensure greater commitment of relevant institutions and communities to promoting the sustainable management and use of the KYB's water. Another one of its objectives is the development and implementation of an effective ecosystem, hydrology and socio-economic monitoring and evaluation system. These objectives are complementary to the ones defined in Phase 1 of this Project. The Project therefore consulted with the LCBC to develop synergies with the Komadugu-Yobe component of the GEF-Lake Chad Basin project (i.e. LCBC/GEF Project).

The consultation and dialogue processes of the Project were based on the best available knowledge on the basin and ensured that the most relevant information was shared among all parties. This has led to a common understanding of the issues and challenges facing the basin in the water sector and helped each party better understand the perspectives and priorities of other parties.

Where necessary, experts were called upon to help improve awareness on the implications of relevant national and international laws and treaties governing the management of the water resources of the KYB. In addition to government experts, the consultation processes were broadened to involve civil society organizations, academic and research institutes, and representatives of communities.

2.2.2 Partnerships

This Project is a joint initiative by FMAWR, NCF and the then West Africa Office of the IUCN (with acronym IUCN-BRAO) and now the Central and West Africa Office (PACO) of IUCN.

By the Water Resources Decree 101 of 1993 is the omnibus law on which water resources management in Nigeria rests. It gives the FMAWR the mandatory responsibility to implement this law by promoting optimum planning, development and use of Nigeria's water resources. More specifically, the FMAWR is responsible for the formulation of and coordination of national water policies, and for management of water resources, including water allocation between States.

IUCN is a world's oldest and largest global environmental network – a democratic membership union with more than 1,000 government and NGO member organizations, and some 10,000 volunteer scientists in more than 160 countries. In recent years, IUCN has used its convening power to successfully promote initiatives aimed at improving the governance of shared river basins in various parts of the world.

NCF, a member of IUCN, is the lead environmental NGO in Nigeria. NCF is currently managing the Hadejia-Nguru Wetlands Conservation Project in the centre of the KYB, a project that it inherited from IUCN. NCF has provided technical support to the KYB Project, with an emphasis on pilot field interventions.

Because of the fact that the proposed project has various complex components, efforts were made to bring together partners with complementary expertise and strengths.

2.2.3 Project Management Structure

A Project Management Unit (PMU), consisting of a Project Director (part-time), a Project Coordinator, a Project Financial Administrator, three technical officers and three support staff has led the Project. The Project Director was appointed by the FMAWR while the Project Coordinator, Project Financial Administrator, one of the three technical officers and the three support staff were recruited for the Project on contract in close consultation with FMAWR and NCF. The other two technical officers were seconded to the Project by the FMAWR. The three technical officers are legal/social science specialists, a water resources expert and a database manager.

A Communication Specialist and a Hydrologist were to be hired on a part-time basis to work directly under the supervision of the Project Coordinator but this could not materialize while the Project support staff, working under the PFA, comprised an Administrative Assistant and two Drivers. The Project had to employ the services of professional security guards to man the Project office.

The Technical Advisory Committee (TAC) of the HJKYCC was made to serve as the Project Steering Committee (PSC). The PSC was to monitor project implementation and ensure that the Project proceeds in a timely and efficient manner in accordance with the Project document. It was empowered to approve changes in project activities suggested by the PMU, provided such changes did not affect the agreed project objectives and key outputs. Any other substantive changes, especially those affecting the project budget were forwarded to IUCN and the project donor partners for approval. Meetings of the steering committee were convened as often as the PMU, in consultation with the chairperson, considered necessary. The PSC made appropriate recommendations to the donors on major adjustments to the Project document as reflected in the minutes of the PSC meetings. Other reports pertaining to

the implementation of the Project were forwarded to the PSC and discussed at its meetings. The PSC freely discussed issues relevant to the Project as its members deem relevant.

2.2.4 Inception Plan

The major pre-project activities were: (a) having the FMAWR appoint the Project (part-time) Director; (b) hiring the Project Coordinator; (c) pursuing contacts and negotiations with the authorities of FMAWR (on modalities and timing of staff secondment, and on logistical arrangements for the Project staff and activities); and (d) pursuing contacts with other key implementing partners, and with actual and intended donors partners. Agreements were translated into MoUs.

During the inception phase (three months which extended to four months), the following were done: establishing office facilities, hiring of additional staff (Financial Administrator, Database Manager and Support Staff) and finalising secondment of government staff. Once on board, the Project technical staff: (a) finalised the description of the Project components; (b) reviewed the literature and analysed the existing data; and (c) assessed the training needs (stakeholder forum, staff and other relevant parties). The Project office, located in Kano in the upper reaches of the basin, was equipped with two 4-Wheel Drive vehicles by FMAWR.

2.3 Expected Outputs

The Project has the following five outputs listed below for its Phase 1:

- Improved understanding of the dynamics of water demand and supply in the basin and the socio-economic and ecological condition of the people and other resources;
- Reliable efficient and sustainable water utilization techniques and approaches available for dissemination among the stakeholders and interest groups;
- The water management institutions in the Basin countries provide an enabling legal and policy environment that supports the institutionalization and implementation of the agreed basin charter;
- A Catchments Management Plan that incorporates an ecosystem approach to basin management agreed by most stakeholders and interest groups; and
- Project effectively managed, monitored and evaluated and lessons learned and disseminated.

3. THE LESSONS LEARNED

3.1 Preamble

A lesson learned is a statement of experience gained, be it positive or negative, from an event or a process. Everyone wants positive experiences repeated where they occur or replicated elsewhere. On the other hand, no one likes to have negative experiences repeated or replicated. Regardless of whether they are positive or negative, it is wise to have as many of the experiences gained articulated and recorded for posterity to use, be it in the immediate or distant future.

3.2 On Building Decision-Support Knowledge Base

1. **A comprehensive database was difficult** to assemble, but is now put in place, to facilitate decision-making. The database developed from scattered sources and data rescued from odd places by the Project is the most comprehensive collection of data and information on the basin available to date. It is expected to serve as a useful source of data and information to planners, decision-makers, researchers and students working in the basin.

2. **Due to the serious information deficiencies at the state level**, it is necessary to resort not only to interpreting data from national statistical sources but also from supplementary sources, public ones (national and regional, in the targeted fields), and academic papers or specialized non-governmental organizations. Instruments specifically designed for data collection can be a useful and efficient option, although not an economical one.

Systematized information on rules, programmes, projects and government actions in the different jurisdictions acting at the local and state levels are very valuable inputs for data management beyond the formulation of the plan of action. The prevailing situation in almost all the states within the basin was lack of data and apathy towards data generation, collation and storage. One way of correcting this abnormality is to establish database units in relevant ministries and/or agencies with annual budgets and defined targets. Advocacy and mobilisation will assist in changing attitudes and bringing sustainable commitment in data management.

Given the amount and complexity of hydro-geologically related information, rural development often requires institutional strengthening and the development of management information systems in partnership with organizations in order to build their capacity to gather, share, and analyze such information. This information will assist the partners in understanding the environment and can help to better plan the hydrological aspects of rural development. While environmental sustainability is a key objective in rural development, poverty reduction is usually the overarching goal. Thus, protection of the environment must be balanced with economic growth, community development, and the water resources management.

It is necessary for local governments to allocate resources to improve their information systems with regard to the necessary basic hydrological and geological data for establishing goals and evaluating the scope of coverage of the programmes implemented within their fields of action. With the purpose of improving the information available to the population, which is a basic input for effective participation and sound knowledge sharing, there is great need to improve the recording and/or production of data, and make greater efforts for disseminating them.

Sound knowledge can be gained from modern, scientific research and from the experience of local professionals and inhabitants. By providing technical training and an opportunity to combine scientific and local knowledge, rural development efforts can play a key role in developing and sustaining local capacity for long-term research to improve research techniques and local contents, hence, the need to engage local researchers to assist in attaining project goals. Government agencies like NIMET (Nigeria Metrological Agency) responsible for data storage should be partnered with; this would ease data collection process from them.

3. The socio-economic survey of the basin conducted by the Project to know more about the current situation of the people in the basin and their economies as well as ecological conditions showed: (a) decisions taken on current data are better than relying on outdated studies, (b) the more you know about the socio-cultural aspects of the people the better you can appreciate their problems, and (c) the need to partner with the people in addressing their challenges and generating their trust and confidence.

4. It appeared as if research institutions and public policy-managers are not interacting sufficiently to facilitate free exchange of information and capacity-building for the stakeholders and key protagonists in the basin. There is the need for an all-inclusive approach in tackling the problems and challenges of the basin; they cannot be tackled in isolation, but with all-inclusive approach. Interactions among key actors, of the type the KYB Project has experienced in the past 42 months, need to be worked upon and encouraged.

3.3 On Pilot Intervention Projects

1. As a natural fallout from the Project's experience in putting a database in place, agencies have been motivated in seeking to collect and keep proper records of hydrological and other relevant data and information. Owing to funding limitations, the PMU had to conduct a feasibility study on possible present and future pilot interventions. Even when funds are available the PMU should be encouraged to participate in such technical activities, thereby improving its own capacity-building capabilities. The pilot activities undertaken by the Project so far have resulted in improved water flow, the impact of which is already felt by some communities and by the Kano State Water Board. According to the Tiga Dam operation manager, since the clearing of the dam outlets, the water flow situation has improved and there were no more complaints from the Kano State Water Board to increase water release. The Project has fixed some damaged gauging stations and assisted and/or trained some state ministries/agencies officials such as those of NEAZDP in Garin Alkali near Gashua and Jigawa State Ministry of Water Resources in hydrological data collection as well as assisted development authorities in analyzing its raw data.

2. Adequate knowledge of the local context of the project area by Project staff is a key success factor in rural development projects. Although the goals of local actors (governments, donors, NGOs, CBOs, local partners, and beneficiaries) in the different States are often similar, namely: to improve land and water resources management and sustain their productivity in order to improve their livelihood and raise their standard of living sustainably, rural development takes place in different

contexts. Consequently, the success of a project in one State may be a failure in another if adjustments and local contents are not adopted.

It is often a challenge for the PMU to work with a variety of local people and groups in establishing program and project objectives and activities that will most benefit the community; however, as rural development often requires multi-sector interventions, participatory and collaborative planning helps to ensure that all relevant aspects of the community's development are taken into consideration. Effective collaboration is important in ensuring the appropriateness and long-term sustainability of efforts as this promotes shared responsibility and a feeling of ownership among stakeholders. The importance of "key entrance activities" to gain community confidence is always paramount.

3. Empowerment of the Poor and the Marginalised by Group Formation.

The PMU subscribed to the view that the purpose of group formation is to target the poorer members of the communities so they can be involved in development activities and gain advantages in economies of scale. Groups, such as the Nguru Integrated Farmers Association (NIFA), encouraged the participation of the poor and the marginalised in rural development policy-making in natural resource management and biodiversity conservation. Groups provided a mechanism to preserve local cultural heritage and traditional know-how which in turn enhanced the project achievements.

Statistics on the economy of developing countries demonstrate that the majority of the absolute poor are rurally based, with women and children being particularly vulnerable. Women's contribution to water conservation in terms of expertise, managing and labour have been estimated to about 80 percent in most developing countries, but this contribution remains largely under-appreciated and under-valued. The lack of an effective internal policy on gender equity in a rural development institution can undermine efforts to achieve sustainable development, hence, the need to involve more women both at state and local government levels so as to achieve sustainable project goals.

4. There is adequate support to the establishment of stakeholder forum in the basin for the purpose of actively participating in decision-making processes. The stakeholder forum supported by the Project has helped to foster understanding and increase participation in decision-making processes by all stakeholders. In the past any construction upstream at the Kano end was viewed with suspicion and resisted by States and communities at the downstream end of the basin. The involvement of all stakeholders and interest groups in the project activities has impacted positively on conflict resolution especially at the NIFA operational area. In the past, there were at least more than 100 court cases between farmers and cattle-rearers annually, but in recent times there were less than 10 cases because conflicts are now resolved more amicably through dialogue.

Communication in the project should be tailored to the needs of stakeholders and to flow bi-directionally, if it is to contribute to the success of the project and delivery of project benefits in the subsequent phases. The PMU should keep up the use of the combination of outward communication from the project and consultation with stakeholders to ensure that there are no surprises for either side. The KYB Project adopted this philosophy by engaging regularly with stakeholders. Initial consultations with stakeholders revealed a range of expectations of the Project and some variation in key stakeholders' capacity to manage change. The Project team undertook **both** to communicate the aims, objectives and progress in the Project, **and** also to work with key stakeholders to help them prepare for change.

3.4 On Water Charter

A water charter was produced, adopted by the stakeholders' forum and is now awaiting endorsement by the chief executives of the riparian states. It was designed to promote and coordinate effective planning and management for equitable, efficient and sustainable use of water, land and environmental resources in the KYB. The preparation involved various interactive meetings in each of the six basin states.

1. The Project's approach of bringing stakeholders together to discuss and agree on issues has been well appreciated by all the stakeholders. This participatory approach is instilling the feeling of involvement and ownership of outputs and outcomes, thus ensuring sustainability and continued benefits. It was agreed that a

charter based on mutual agreement of all stakeholders has a higher degree of acceptability and sustainable success.

2. Access to data and information on land and water resources development are not sufficiently open in the basin. The importance of good database and information system for IWRM is inextricably linked to the need to allocate water more efficiently and effectively to meet specific and general needs of society. Therefore, database and information system play a significant role in the efficient and effective management of water resources. A reliable water resources database and information system is, hence, needed to meet specific and general characteristic demands, needs and development of IWRM.

3. Integrated Water Resources Management (IWRM) requires the ability to establish effective linkages between departments and economic sectors to allow for the development of integrated planning and management. There is an incontestable inter-relationship between land and water. Thus, water resources management pursued independently of land use policy and development can neither be effective nor sustainable. Therefore, if an envisaged IWRM is to succeed in the Komadugu Yobe Basin, there has to be consistent land use and water resources management policy.

4. Biodiversity and environmental protection require interdisciplinary, inter-sectoral and inter-institutional projects and approaches. All kinds of projects alter the environment. The challenge of environmental problems emanating from the use of water have both qualitative and quantitative facets and both in-stream and off-stream aspects. Therefore, biodiversity and environmental protection require interdisciplinary, inter-sectoral and inter-institutional projects and approaches.

5. Public participation generates tangible benefits, foster cooperation in the process of developing and implementing strategic actions. It is important to make the benefits to be derived from public participation clear through provision of some social needs and awareness-raising to the concerned communities.

6. Transboundary cooperation is the key in achieving consultation and exchange of data and vital information on transboundary activities. In the face of dwindling water resources, there exists the need for regular consultation and exchange of data and vital information on transboundary activities between the basin States as part of the implementation of a successful and sustainable ecosystem management in any scheme of basin-level IWRM. Such transboundary cooperation is also paramount between Nigeria and Niger as the two countries share the Komadugu Yobe Basin.

7. Informed decisions help to break barriers and generate the needed support from policy-makers. Perhaps the most important impact of the Project was the sensitization of the political class on the problems of the basin and the need for immediate action. This sensitization has contributed to the setting up of the Komadugu Yobe Basin Trust Fund.

8. Ecosystem management within the KYB can only be implemented successfully and sustainably if it anchored on the development of sustainable livelihoods. The livelihoods to be obtained from ecosystem management in turn depend on the sustainable management of the natural resources in the basin. A sustainable livelihood should be resilient, that is, able to withstand and recover from stresses and shocks. It also requires maintaining and enhancing its assets throughout the basin both in the short and long runs, whilst not undermining the natural resources base. Conserving natural resources, therefore, constitutes an indispensable factor in such a sustainable livelihood strategy.

9. Economic Values

An IWRM approach to sustainable water resources management requires the realization of the high economic values associated with natural ecosystems, and to accept the fusion of these values in ecosystem management, in water decisions and in the land use and development activities that impact on ecosystem integrity and water supplies. It is important to be able to properly assess and adequately quantify the economic value that natural ecosystems provide by assuring the supply and quality of

water and other goods and services, and to establish clearly the economic consequences associated with the degradation or loss of these ecosystems. These economic values have to be integrated into the policies, economic decisions and activities of the diverse sectors and stakeholder groups whose welfare and wellbeing depend or impact on the basin's water and water-based ecosystems.

10. Collective will and popular awareness should be backed by strong political will. It goes without saying that suspicion and mistrust about rival intendments is prevalent among the basin peoples and parties. It requires political will to break barriers and transparent dealings to restore trust and mutual confidence among the basin peoples and parties.

11. Institutional Weaknesses

Certain weaknesses are identifiable in the present institutions set up to manage the water resources of the basin, namely; the River Basin Development Authorities (RBDAs). For instance, they are presently both suppliers and consumers of water resources. In effect, the law setting up the RBDAs constitutes them into regulator and user. This situation has engendered conflict of interest. Additionally, the operational domains of RBDAs are delineated by political boundaries and not hydrological boundaries. There is, therefore, the need to coordinate the activities of all institutions clearly specifying roles and responsibilities.

3.5 Catchment Management Plan

The Catchment Management Plan (CMP) prepared by involving all the stakeholders was finally adopted by the Governors of the six riparian States and the Federal Government of Nigeria, after the ratification of all stakeholders.

1. The overwhelming acceptance of the CMP was largely because: (a) the stakeholders had for long been yearning for such a document to emerge; (b) they had been involved from the beginning and essentially throughout its development, thereby making it easily acceptable to them as part-owners; and (c) planning with timeframe and budget lines (figures), the way the CMP was, bring faster acceptable results when

dealing with people generally, and with public servants in particular. A CMP can be strengthened with information from a sound water audit.

2. Pre-water audit and the actual water audit were conducted in order to determine the water demand and supply in the basin. These provided vital information required for optimal decisions on water management options, as: (a) planning enhances the achievement of set goals and (b) improved understanding of available limited resources increases harmonious acceptance of the basis of sharing the resource. There should be a much greater emphasis on water resource management and a shift of emphasis from water resources supply management to water resources demand management strategy. These studies form the basis for informed dialogue on decision-making.

3. Multi-stakeholder (participatory) approach is slow, expensive and time-consuming. However, it helps to mobilise partnership and confidence with line Ministries and Agencies of Governments, decentralised Local Government Authorities, Non-Governmental Organizations and Community-Based Organizations, and also improved communication between stakeholders at all levels.

3.6 On Effective Project Management

1. Setting a realistic timetable

The Project inception to final take-off took so much time. Negotiation for project take-off date and the period of implementing the bulk of the proposed changes in some elements of the project activities dragged on for too long. This affected the entire timetable and necessitated a lot of adjustment on the project timetable and budget in order to deliver a high quality output.

In a normal multidisciplinary project, project managers should be made to have adequate provision in their planning and budget for the time required to negotiate with stakeholders, evaluate options, make decisions and take action to achieve the Project's objectives. Allowance should also be made for the effect of unforeseen risks and obstacles, which inevitably arise in such projects.

2. Remaining constantly in touch and vigilant with project partners and stakeholders. Occasionally, the PMU team had to resist pressure from internal and external stakeholders either to ‘just get on with it’ or to apply more rigid and bureaucratic procedures in the course of its decision-taking process. On such occasions, the Unit applied the necessary flexibility to react to events and developments as negotiation proceeded. An example of this was the PMU’s response to concerns raised by some of the project partners who were not so comfortable with the key deliverables of the Project within a short time of its presence. It would have been a show-stopper if the PMU did not resolve it as quickly as it did.

The PMU conduct of weekly management meeting on strategy and reporting needs of the Project enabled risks and “grey” areas to be identified, tracked and prioritised, and mitigation and contingency measures, developed. It was a rewarding practice. At key stages in the Project, the PMU realised that its success depended more upon what the Project communicates to stakeholders, wittingly or unwittingly, than what it does or delivers. To ensure the ongoing buy-in of stakeholders, the PMU had to anticipate and address their concerns through the intervention projects and respond to changes in stakeholders’ expectations, hopes and fears.

3. Establishing contingency plans and agreeing on these with the Project Managers particularly at the Regional level and adopting a robust approach to challenges and set-backs.

Contingency plans need to be agreed in advance with the Project managers at the Regional level and at the Headquarters for effective response to developments in the Project. In any complex undertaking, there will be developments and set-backs that frustrate the team and demand changes in the project plan. Effective management of issues can do much to address this, though inevitably some risks and issues are difficult to anticipate until they arise. A useful approach to counter this is to develop two or more alternative solutions to each problem, whenever possible. There is therefore the need for the PMU to be encouraged to retain the knowledge, skills, capability and authority to take decisions as well as proffer and implement solutions to problems as they arise.

4. Fund-raising and negotiation strategy

A lesson learned in this respect was the need to develop and prepare, rather quickly, a negotiation strategy in terms of fund-raising, and to have a fall-back position should negotiations fail, by exploring the objectives, constraints and preferred outcomes for the negotiation from both viewpoints. A better model for counterpart funding should be defined with government agencies or ministries to avoid its consequence of undue delay in the execution of project activities. To minimize delay in accessing promised funds, the PMU must acquaint itself with the working procedures of all donors, who may not change their procedures because of any single project.

5. Recording the rationale for decisions

From the outset, the PMU has never compromised the value of proper documentation of project deliberations, decisions and deliverables. Managers of future projects should try to ensure that records of decisions taken describe and evaluate the range of options considered, the key factors or criteria influencing the decisions and the actions taken. Subsequently, capturing and evaluating the actual outcomes and the lessons learned forms a useful basis for continuous learning at an individual, team and organisational level.

6. Best Practice in Asset Management

The PMU sought to identify and apply good practice wherever possible especially as it pertains to project property, and has subsequently been actively involved in discussions with the Federal Government of Nigeria (FGN) and other key partners, particularly in the area of “in-kind” donations.

The PMU’s ability to generate project results and make reasonable projections of outcomes and impact are linked to a clear and realistic choice of a limited number of priorities and to an ability to get swiftly oriented towards its core challenge of meeting project deadlines.

7. Securing good, knowledgeable advice where this is not available internally.

Project managers must have, as done in this case, the courage to source and make full use of internal or external ‘expert’ advice when necessary. This includes the use of consultants who, whilst expensive, offer experience, skills and knowledge that may not be available to organizations that carry out major projects only infrequently. Bringing in external consultants early in a project may cost more initially, but should serve to increase the available skills and experience and therefore maximize benefit and value for money.

8. Collaboration With Projects

In order to execute the pilot interventions the Project relied on financing from a sister project and collaborated with another in the technical execution and supervision. Collaboration with other projects: (a) allows for wider resources in terms of technical, managerial, supervisory and finance than could be possible for a single project; this is synergy in action, (b) allows each project to concentrate on areas of comparative advantage thereby increasing the cumulative assets to the benefiting communities, (c) requires all the collaborating projects to discharge the agreed responsibilities, since a default by one affects the others, (d) may lead to unnecessary misunderstandings as a result of likely differences in execution approaches, emphasis and priorities, and (e) makes deliverable dates uncertain since all the projects are severally and jointly liable for the outcome.

9. Finance

With a prudent and transparent management of the US\$ 0.75 million (about 58% of the KYB Project Phase 1 initial budget) made available to it and with commitment and sacrifice by the PMU Team members, the Project has been able to achieve its deliverables, except for the Pilot Intervention Initiatives which are being executed in collaboration with other partners in the basin. Frequent reviews of the budget to match available resources without compromising the desired goals of the Project called for stringency on the part of the PMU and commitment and sacrifice on the part of the team members.

3.7 Direct Reactions of Stakeholders

Apart from 'Lessons Learned' that have been articulated from the various documents, stakeholders interviewed during the preparation of this report had useful comments as additional lessons learned.

1. Abandoned project syndrome

That only one of the eleven LCBC-GEF funded KYB pilot intervention projects has been fully completed is not a pleasant report. It must be said though that even those that are partially completed have created positive opportunities for community interaction, capacity-building and a sense of ownership of the projects by the participating communities.

2. Inadequacy of funds

With only 58% of its original budget made available, KYB Project Phase 1 was evidently financially constrained. It is hoped a superior funding mechanism and strategy will be employed to raise fund for KYB Project Phase 2. Potential donors should be encouraged to make firm commitments to the Project before its commencement. Membership of Nigeria as a State Member in IUCN is worth considering and pursuing to its logical end. This may ease the funding problem of the Project somehow.

3. Relationship with Project partners

A few initial inter-partner disagreements notwithstanding, KYB Project Phase 1 has been held in high esteem by its Project partners. The PMU has been appreciated for its patience, for taking positive advantage of the synergy with its Project partners in collaborating with them rather successfully on pilot intervention activities. It was also commended for its prudent financial management and ability to achieve as much as it did with so little funds made available to it. Given more funds and a more relaxed log-frame some of the partners believed that the CMP and the Water Audit exercises would have yielded better outputs in depth and width. On the Water Charter, sources

close to two of the Project partners advised that extra effort should be made to penetrate the government houses of the six riparian States in order to get the Water Charter endorsed by the governors.

4. Stakeholders' fora and community interaction

The impact of the participatory approach of the Project in all its activities, including the LCBC-GEF-funded pilot intervention activities, were rated exemplarily stimulating by the various stakeholder groups spoken to. These include among others, NIFA and Wings Over Wetlands (WOW) Project personnel at Nguru and the North East Arid Zone Development Programme (NEAZDP) at Garin Alkali near Gashua. At NEAZDP, KYB Project's assistance to its hydrological unit to rehabilitate and improve its facilities was profoundly acknowledged. Similarly, Borno State IWRM Committee in Maiduguri wished KYB Project would continue much longer or be succeeded by Phase 2 as soon as possible if Phase 1 must wind up now. The CMP, the Water Charter, the Water Audit and the KYB Trust Fund are household expressions associated with the KYB Project among these stakeholder groups. They observed though, that they wished the Project would be better funded to undertake more activities with the zeal and enthusiasm with which KYB Project executed Phase 1. The Project's contributions towards conflict resolution and local initiatives as well as CBO and women economic empowerment activities in the KYB were well reported by NIFA members and the NCF's WOW Project personnel, as having significant impacts on the beneficiary communities. NIFA is not yet 'weaned' and so would not want KYB Project to wind up yet, before it is strong enough to stand on its own.

4. THE WAY FORWARD

The positions articulated in the Water Charter document as the way forward to achieving an equitable and sustainable use of the water resources of the KYB as well as enhancing the efficiency and profitability of any investment made therein, are apt and need only a slight modification. The positions are itemised hereunder:

4.1 Need for New Development Philosophy for Sustainable Development

- ❖ Expand only what works, just like any successful economic enterprise would do;
- ❖ Involve stakeholders in development for sustainability;
- ❖ Make sector investment attractive for accelerated coverage of efficient, sustainable service;
- ❖ Recognise the role of private sector investors;
- ❖ Prepare legal and regulatory frameworks which acknowledge and recognize public-private partnership; and
- ❖ Reform the sector institutions to serve the stakeholders.

4.2 Solving Technical Problems

The technical capacity of water-related institutions in the basin needs to be strengthened for them to cope with the demands of fulfilling their mandate. In particular, assistance will be needed in the areas of experts, training of staff and the provision of hydro-meteorological and hydro-geological data collection equipment.

Water Audit exercise should be undertaken quinquennially i.e. every five years, while the CMP should be fine-tuned in depth and breadth.

4.3 Territorial Boundaries of River Basin Institutions

Readjustment of the territorial jurisdiction of the RBDAs to coincide with the hydrological basins is needed to facilitate IWRM.

4.4 Others

- ❖ The technical aspects of the appropriate water management and related issues such as adequate collection and storage of standardized data leading to equitable allocation of water through coordinated releases from the dams should be embarked upon on a priority basis.
- ❖ The different parties involved as stakeholders in the basin should be involved in participatory decision-making in order to ensure adequate cooperation from them as this is crucial to the success of any programme launched within the basin.
- ❖ The relations between the contending parties in the basin should be made easier through a systematic and sustained programme of public enlightenment to raise awareness and eliminate conflicts, real or potential.
- ❖ The political will to carry out proposed reforms must be mustered by both the federal and basin states governments with a view to seeing the Charter implementation process carried out to its logical conclusion.
- ❖ Finally, extra efforts should be put into the issue of the Water Charter endorsement by the Governors of the six riparian States. This requires lobbying.

5. CONCLUSION

The challenges of this first phase of the KYB Project have been enormous, the ‘Lessons Learned’ from it have been encouraging, but above all, participating in the Project has been most rewarding – to the individuals in the PMU, to the donor partners and most importantly to the KYB communities for whose benefit the project was designed in the first place. The basin’s stakeholder groups who have tasted the flavour of participatory development and have had a glimpse of what collective efforts (synergies) can achieve in this first phase, are waiting anxiously for more benefits to come with the second phase of this Project.

The problem of inadequacy of funds for the Project re-echoed several times during the course of this exercise. As much as possible, extra efforts should be made to convince or persuade more donor agencies to contribute towards the funding of the future phases of the Project.

It has to be emphasised that the PMU’s ability to generate project results and make reasonable projections of outcomes and impact have demonstrated the clear and realistic choice of a limited number of priorities and the ability to get swiftly oriented towards its core challenge of meeting project deadlines/milestones.